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ABSTRACT

This study involved observing a second-grade classroom to investigate how the teacher called on students, noting whether the teacher gave enough attention to students who raised their hands frequently by calling on them and examining students' responses when called on. Researchers implemented a new method of calling on students using name cards, which involves placing each student's name on an index card. When the teacher asks a question, a card is chosen for a response. Students were observed over 5 weeks, and the teacher was introduced to name cards. Students completed surveys asking which method of being called on they preferred. Overall, the teacher did not call on students who raised their hands as frequently as students chose to participate. This did not discourage students from continuing to raise their hands, though they appeared frustrated. The teacher mainly called on students whose hands were raised. Using name cards, the teacher called on all 21 students. Students had the same frustrated responses to not being called on when name cards were used, though less frequently. Most of the students preferred the name card method. An appendix contains observation transcripts, survey questions and results, and teacher interview guideline questions. (SM)

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ED 448 141

Who Are We Not Calling On?
A study of classroom participation and the implementation of the Name Card Method

Angela Carter
April 12, 2000

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Abstract

A study of the question, Are we ignoring students who frequently raise their hands? This project is an observation of a second grade classroom in Charlottesville, VA. The study began with five weeks of observation of the regular classroom method of participation in which the teacher chooses the students to call on. The second part of the study implemented a new method of calling on students using name cards. A comparison of these two methods is made in this study and includes surveys of the 21 students in the classroom questioning which method of calling on students they prefer. The data results indicated that teachers do not call these students who raise their hands often as frequently as the students choose to participate, but this does not discourage these students from continuing to frequently raise their hands. Seventeen of the 21 students preferred the name card method of calling on students.

I: Problem

This project began out of my own experiences as both a student and a teacher in the classroom. As a student I tend to raise my hand repeatedly during lessons to both answer questions or to contribute information. Many times I get frustrated because teacher does not call on me when my hand is raised. I recall one instance in which the teacher called on the student to the left of me to respond and continued around the classroom until the student to the right of me responded. With this student, despite my hand being raised and all other students having a chance to respond, the teacher said, "This will be our last response," leaving me out. Although I am aware of my own frustration with this problem, during my student teaching I found myself neglecting to call on students very often who repeatedly had their hands raised. Instead, I was trying to call on students who were quiet to encourage their participation and to call on off-task students to bring their attention back to the subject. This project will aid teachers by assessing two methods of participation, the teacher calling on students and a name card method, to help lessen these problems when calling on students.

II. Definition of Terms

Traditional hand-raising method: This method has been used for many years and is used by the majority of educators. In this method, students raise their hands to respond to a question asked by the teacher or raise their hands to ask a question or make a comment. The teacher then chooses which student to call on.

Name Card Method: In this method each student's name is placed on an index card. When the teacher asks a question a card is chosen to call on a student to respond, therefore it is random selection. The variation of this method used for this study allowed 2 WILD cards to be placed in the deck. When a WILD card was drawn the previous student that responded called on someone to respond.

Response Card Method: This method is referred to in the Literature Review section. In this method every student has either a pre-made slate or an erasable slate and uses this slate to respond to every question. When a question is asked, students all show their answers. With this method, every student responds to every question.

Volunteered response: A volunteered response is a response where the student chooses to respond without being specifically addressed by the teacher.

Teacher-initiated responses: This type of response is one in which t specifically designates a person to respond before asking the questi

III. Introduction

The purpose of this study is to investigate whether teachers are giving enough attention to students who raise their hands frequently by calling on them. The study also investigates the responses of these students when they are called on to respond. The second half of the study implements a name card method of participation to investigate its affect on students' participation. Students will be surveyed at the conclusion of the study period to find which method of participation they prefer.

IV. Hypothesis

In my study, I expect to show that students who raise their hands frequently are not called on as often as they would like to participate. I expect these students to both lessen the frequency of raising their hands and make comments which reflect their frustration of not being called on, such as "You never call on me." The students will prefer this method of participation, the name cards method, over the previous method of the teacher calling on students.

Section II will provide information about other research that relates to this study. Interviews of teachers who use the name card method will provide more feedback on classroom atmospheres and students' responses to this method. Also results from studies of methods similar to the name card method will be presented and the results of those studies.

Section III will re-create the setting of the classroom that was observed and present the steps taken to research

this topic. How the data is analyzed as well as limitations, what was not being observed, also will be discussed in this section.

Section IV will present data that will support or challenge my hypothesis. This section will examine questions about students who frequently raise their hands as well as questions and student responses about the two methods of participation.

V. Review of Literature

Ensuring that all students are participating in the classroom is a difficult task for teachers, but the Name Card Method is one way to include everyone in the classroom. "The Name Card Method communicates our expectation that all students will be active" (Winebrenner, 1996, 13). Promoting the participation of all students by using name cards affects other areas of the classroom as well. Research suggests that these effects on the classroom—participation, management, community/classroom atmosphere, and academics are positive effects and students enjoy the technique.

Having every child's name on a card and encouraging the involuntary participation of students by randomly calling these students increases participation of all students. In Jaqui Cecalupo's fourth grade classroom which uses the Name Card Method "every child gets a turn before going again"(Cecalupo, 3/24). Allowing each child a turn requires all students to be a part of the discussion, ensuring that both children who raise their hands frequently and children

who seldom raise their hands have the opportunity to speak. Although Ms. Cecalupo does acknowledge that there are still antsy, overanxious students, she feels the Name Card Method "puts everyone on equal ground" (Cecalupo, 3/24).

The Name Card Method also affects classroom management. The Mailbox issue for April/May 2000, a magazine in which teachers send in ideas to share with other teachers, this method is presented by Sister Maribeth Theis, a second grade teacher, as a Lifesaver Management Tip for Teachers (Mailbox, 57). Jaqui Cecalupo uses this technique throughout the school year, but shay that she uses it at the beginning of the year for discipline—the cards "keep students highly engaged because they won a chance to respond versus being called upon" (Cecalupo, 3/24). Ms. Cecalupo stated that discipline was one of the advantages of the cards, as well as the cards helping to control calling out (Cecalupo, 3/24).

Improving the classroom atmosphere is another positive effect of the Name Card Method. Some of the ways Jaqui Cecalupo states the cards affect the atmosphere in her classroom are "diminishes competitiveness, helps develop respect for classmates, creates a game-like atmosphere (students think it's fun), opens relationships, and is community building" (Cecalupo, 3/24). The name cards allow everyone to be on an equal level because participation is involuntary and the students feel confident to answer or get help from another classmate. Having everyone participate

creates an open classroom where students feel confident to share ideas.

As stated above, Ms. Cecalupo states the name cards create a "game-like atmosphere (the students think it's fun)" (Cecalupo, 3/24). Students enjoy this method because it ensures their opportunity to participate–the students "feel like they win a chance to respond" (Cecalupo, 3/24).

Although no research on using the name card method states academic improvement, a similar method that promotes whole-class participation, using Response Cards does suggest this as an effect of student participation. Response Cards are cards each student has either pre-made responses or slates on which students write answers, allowing all students to respond to each question. The support for student achievement using this method is based on John Dewey's idea that "students learn by doing" (Gardner et. al, 1994, 63). Allowing students the opportunity to be active participants, as is also done using the Name Card method, increases their ability to learn. "Student academic achievement is correlated with active student response in the classroom" (Narayan et al.,1990, 484). Allowing students a greater opportunity to participate will keep students more active, enhancing their learning (Gardner et al, 1994, 63). The research on active learning and its effects on academics suggest the Name Card Method, which keeps students active through involuntary, whole-class participation, may positively affect academics.

Susan Winebrenner in her book Teaching Kids With Learning Difficulties in the Regular Classroom titles the section which discusses the Name Card Method "Getting Everyone Involved in Learning" (Winebrenner, 1996, 13). Winebrenner's discussion of this method for active student involvement summarizes the positive effects of this method on participation, management, and community/classroom environment and students' enjoyment.

> "It gives kids a chance to develop friendships. Plus it eliminates many typical classroom problems:
> -No students will ever be able to "hide" from you again by being uninvolved.
> -No students will ever be able to dominate classroom discussions.
> -"Blurting" or calling out answers will be dramatically reduced.
> -Listening behaviors will be dramatically improved.
> -There will be nearly 100 percent participation in all discussions.
> -You will not unconsciously engage in ethnic, cultural, or gender bias as you lead discussions.
> -Students of all ages and abilities will find this method preferable to traditional hand raising and will be motivated to participate in discussions. (Winebrenner, 1996, 13-14).

The Name Card Method provides all students to participate, having a positive effect on the classroom and the students. Other methods of whole-class participation also suggest an improvement on student academic achievement.

VI. Methodology

This study was performed at an elementary school in Charlottesville, Virginia. The classroom setting is a second grade classroom with 21 students, 9 boys and 12 girls. The students are ages 7 and 8.

The students in this classroom were observed for 10 lessons occurring at the same time every Monday and Wednesday morning, for calendar activities and math. The first 5 observations observed the regular classroom method of calling on students and students' responses. The last 5 observations observed the teacher's implementation of the use of name cards when calling on students and the students' responses. Using the name card method, each student had 1 name card placed in a stack. The teacher was instructed to use the name cards to call on students. The stack also contained two WILD cards which when chosen, allowed the last student that was called on to choose the next person to be called. At the conclusion of the study, students were surveyed about the two methods of participation.

Systematic observation and student surveys are the tools used to measure the problem proposed for this study. In analyzing the data collected for the study I reviewed the videotapes of the classroom observations, reviewing all of the activities that occurred in the classroom and transcribing some of the conversations. In doing this I was closely observing what students were raising their hands, when they were raising their hands, and recording that the

teacher called on. I also observed students' responses when they were and were not called on by the teacher. During the second part of the study using the name cards to call on students, I observed the teachers use of the name cards. In addition, during this part of the study, I also continued observations being made in the first part of the study—who raises their hand, who is being called on, and the students' responses when called on and when not called on.

I will be using my data to answer the following questions. These questions will help guide my study of the problem, do teachers ignore students that frequently raise their hands, and to compare the two methods of participation, teacher choice when calling on students versus the name card method. The questions are:

1. Why are students raising their hands? Are the students volunteering or did the teacher initiate the student's response?
2. Who is raising their hands frequently?
3. Is the teacher calling on the students often?
4. What is the behavior of the students when they are called on? When they are not called on?
5. Who is being called on using the name card method?
6. What are the students' responses when the teacher calls on them using the name cards?
7. How do students respond when their name cards is not called?

Based on the survey:

8. Which method of participation do the students prefer?

To answer these questions, which will help to draw a conclusion on my problem presented in Section I, I reviewed all transcripts of observations, focusing on finding data to answer each of the above questions. For the survey, I tallied student responses to determine the number of Yes and No answers to each question.

Section IV will present the results found when analyzing the data. This section will present results to the guide questions, which will then provide results to the study question of are we ignoring students who frequently raise their hands and provide a comparison of the two methods of participation. Also addressed will be the hypothesis presented in Section I, comparing the hypothesis to the data results.

There are some limitations to what is being studied in the data. Although I am aware that some students rarely participate by raising their hands, this is not a part of my research. Also a comparison of the gender or race of students who are participating is not a part of my study. The survey also has some limitations as it was created to be simple for second grade students to respond to. The survey, had it been a higher grade would have had more in depth questions about the different methods.

VII: Data Analysis

Earlier stated in section II of this research was the hypothesis for this study which predicted that students who raise their hands frequently are not called on the majority of the time and make comments which reflected their frustration at not being called on. Also predicted in the hypothesis was that students would prefer the implemented method of participation, the use of name cards when calling on students.

Part A: The teacher chooses which students to call on

The research data reveals that there are students who frequently raise their hands. It is usually the same students who repeatedly are raising their hands to participate. Reading through the transcripts it is easy to determine who these students are because of the frequency of their name appearing. These examples from pages 2 and 7 demonstrate this frequent participation.

Page Two, Appendix:
- Three hands go up (Geoffrey, Elizabeth and Lindsay). Calls on Geoffrey to help
- Madeline is called on (her hand is raised) and Madeline asks a question. Lindsay raises her hand to answer Madeline's question. The teacher answers it.

T: "What should I do next?"
- Geoffrey speaks out the answer without raising his hand

T: "What do you think I should do next Danielle?"
- Lindsay and Elizabeth raise their hands
- Lindsay and Elizabeth raise their hands before the next question is asked and then Jordan does too
- The teacher calls on Jordan after asking the question

T: "What else do I need?"
- Lindsay is the only person with their hand raised. The teacher calls on her.

In this example it apparent that Lindsay's name appears frequently, with every question that the teacher asks.

Elizabeth's name also appears a number of times in this short excerpt from the transcripts.

Page Seven, Appendix:
- Miles, Andrew D., Seyoun, and Lindsay raise their hands. The teacher calls on Becca whose hand is not raised
T: "What is the smallest piece?"
- Miles, Evan and Lindsay raise their hands. The teacher keeps reading questions on the sheet without calling on anyone
- She finishes reading the first sheet and begins to explain part 2 of the activity. Seyoun's hand is raised.
T: "If it says 3/6ths how many do you shade Danielle?"
- Three hands go up—one of them is Seyoun's
T: "If it says 2/4ths, Seyoun how many do you shade? If it says _ Megan how many do you shade?" "I need one person to come up and write the fraction for the shaded area."
- Lindsay, Seyoun, Josh D., Miles, Andrew D. and Jordan raise their hands.
- Seyoun calls out, "I have a question."
T: "What's your question Seyoun?"
- After Seyoun's question she calls on Jordan to write the shaded fraction
T: "What part is not shaded?"
- Lindsay, Seyoun, and Josh D. raise their hands. The teacher chooses Seyoun to answer
T: "What do you notice about their answers?"
- No hands are raised. She calls on Andrew D.
She asks about the shaded and not shaded part for the rectangle. Miles, Joshua, Josh D., Lindsay, Seyoun, and Kirsten all raise their hands. The teacher calls on Kelly to answer, whose hand is not raised

Here again it is obvious that a number of students are raising their hands frequently to give a response as their names are repeated throughout the text. Lindsay's name is seen again. Seyoun's name appears the most here as he raises his hand to volunteer for each response.

In the research the responses are student-volunteered responses and not teacher initiated; it is not the teacher specifically questioning a student or telling students to raise their hands. Going through the transcripts most of the students are raising their hands to make a comment or ask a

questions even when the teacher is not questioning, examples of this are the students raising their thumbs to challenge each others work. Even when the teacher directs questions specifically to a student, a number of students still raise their hands to answer, especially if there is a pause by the student chosen to answer–

> - Miles, Joshua, Josh D., Lindsay and Elizabeth raise their hands. The teacher calls on Andrew D. whose hand is not raised. He hesitates and she asks the question again and lots of hands go up (Appendix, 7).

The data does not support my hypothesis that these students who are frequently raising their hands to participate are being ignored. The teacher does not ignore students who raise their hands. Although these students are not called on as frequently as they raise their hands, the teacher does include them often, especially calling on these students when they raise their hands to make a comment or ask a question. The majority of the time the teacher calls on someone whose hand is raised to respond. In the research, although the teacher did call on raised hands the majority of the time, there were periods of time in which students frequently raised their hands and were not called on, but in other lessons that student could be repeatedly addressed–

> - Seyoun's hand is raised and as the teacher writes the fraction he keeps it up. She continues the lesson by asking a question and calls on Miles to answer–Seyoun's hand is still raised. She cuts the apple again and asks a question to Andrew S. Four hands are raised. Joshua is in front waving his hand. Seyoun's hand is still raised. The teacher calls on Josh D. to go to the board and write the fraction. Seyoun and Joshua put their hands down (Appendix, 4)

- Three hands go up—one of them is Seyoun's
T: "If it says 2/4ths, Seyoun how many do you shade? If it says _ Megan how many do you shade?" "I need one person to come up and write the fraction for the shaded area."
- Lindsay, Seyoun, Josh D., Miles, Andrew D. and Jordan raise their hands.
- Seyoun calls out, "I have a question."
T: "What's your question Seyoun?"
- After Seyoun's question she calls on Jordan to write the shaded fraction
T: "What part is not shaded?"
- Lindsay, Seyoun, and Josh D. raise their hands. The teacher chooses Seyoun to answer (Appendix, 7)

Overall, the data did not support that these students were being ignored, but the data did support the hypothesis of students' frustrated responses. Students responded to not being called on by shouting out answers, making noises (oh,oh,oh -the stomachache call), waving their arms, saying "I know" or by getting upset.

-Geoffrey speaks out the answer without raising his hand (Appendix, 2)
-Seyoun has his hand raised. He calls out twice, "I have a question." (Appendix, 4)
-Joshua is in front waving his hand (Appendix, 4)
-Seyoun says, "I was going to say that." He throws his hands down, turns and moves away (Appendix, 5)
-Joshua has his hand raised and is making sounds, "Oh, Oh" (Appendix, 8)

The majority of the time once called on these students offered a responses, but a few times students with raised hands were called on and had no response--

- Elizabeth, Andrew D., Geoffrey and Veronica raise their hands. She calls on Andrew D. but he can't think of an answer (Appendix 3)

Overall, the research did not support that these students who frequently raised their hands were being ignored, but it did support these students attempts to be called on more by

their responses to not being called on—calling out answers, waving their arms, making sounds, or getting frustrated.

Part B: The Name Card Method

The hypothesis predicted that more students would increase whole-class participation and that students would prefer this method. Much of the observational data is not a true indicator of this method. The teacher did not use the method all of the time during the observation, frequently switching back and forth between the methods. In my observation, the name cards were usually used for one portion of the class time that I observed.

The research supports that this method could improve whole-class participation if the method were used properly. During the March 6th class, see Appendix page 13, that was observed the teacher called on all 21 students once using the cards and even began repeating names in the stack. The teacher when using the cards called on at least half of the class once during the period that she used them.

Students' responses to being called on appeared positive. No student commented negatively when called on or showed that they were upset at being called on. If students did not know an answer or if they needed help on the question the teacher would either choose the next card to answer, give the student time to think and let them know they would return to them, or let the students choose someone to help them.

Students' responses when not called on were similar to the responses presented when discussing the previous method of

participation in which the teacher called on students. Students still responded by saying the answer aloud or waving their hands. The data shows that these responses are less frequent during the use of the name cards by the teacher. Students still continued to voluntarily raise their hands to offer a response when the teacher used the name cards, especially if there was a pause by the student answering of if a WILD card was drawn–

- Josh D. pauses and seven hands go up, one student says, "I know." (Appendix, 14)
- Next there is a WILD card; Josh D., Evan, Kelly, Andrew D., Geoffrey and Elizabeth raise their hands (Appendix, 20)

The survey results, Appendix page 22, support the students' preference for this activity. The survey showed that all twenty-one students in the class liked when the teacher called on them and feel happy when they are called on and the majority, 15 students, wanted to be called on more. Eighteen of the twenty-one students liked it best when the teacher used the name cards to call on them and seventeen students in the class wished the teacher would use the name cards more. These results of the survey demonstrate the students' desire to be called on more and their preference for the name card method of participation.

VIII. Reflection

As I look back on this project, if I had more time to study this problem of calling on students, there are some areas that I would have liked to pursue. This page offers suggestions of ways to further research this problem in education of student participation.

First, I would have preferred to begin this study at the beginning of the year. The beginning of the year would have allowed the opportunity to observe students' initial responses to being called on using the regular classroom method of the teacher. I am curious if at this point in the year when I am conducting this study, February/March, if the students' responses are different from the beginning of the year as they are introduced to the teacher's method.

Secondly, I initially planned to study two classrooms at different grade levels but because of the time frame of the study, I had to focus my research on a single grade. A comparison of students' responses to both questioning and to the survey at the different grade levels would have been interesting when comparing the two methods of participation.

A way I would change my project would be using the WILD card differently. In my study, when the teacher drew a WILD card, the previous student that answered called on the next person to respond. In "Mailbox," the April/May 2000 issue, the teacher that wrote in offering this method as a suggestion offered that the previous student called on when a WILD card is drawn have the option of responding again or

calling on someone else to answer. A way to extend this study would be to use this technique for the WILD card and find out how often students responded again and how many times they chose another person to answer, especially focusing on the responses of students that frequently raise their hands.

Another way to further my study of the methods of participation would be to compare the amount of discipline that was needed with each response method. Observing the data to research which method decreased the teacher's need to comment to students to raise "Quiet hands" would have added to the comparison of the two methods of participation, while studying the students' responses to not being called on by shouting out.

Due to time limitations I was unable to pursue these additional studies in my research, but these are some recommendations I would make for continuing and extending this study.

I do feel that this area should be researched more because the research does suggest that the name card method allows students to respond more frequently and suggests that students prefer the use of the name cards. Another question to add to the survey would be if they feel they have the chance to respond more frequently using the name cards. Studying more classes, at different grade levels, would provide further research to add validity to this study.

IX. Conclusion

This project evolved from my own experiences as both a student and a teacher. As a student I felt I was being ignored because I attempted to participate frequently and as a teacher I became aware that I did not frequently call on students who repeatedly raised their hands because I needed to call on quiet or off-task students. I wanted to answer the question; do teachers ignore students who frequently raise their hands? As a solution to this problem I wanted to implement a method that would include these students, as well as the whole-class, in classroom participation, therefore I implemented the Name Card Method as part of the study.

My hypothesis was that the teacher would not frequently call on the students who frequently raised their hands. I predicted these students would have responses to not being called on that would attempt to gain the teacher's attention or show their frustration at not being called upon. I hypothesized that the Name Card method would promote whole-class participation and that the students would prefer this method of participation to the traditional hand-raising method of participation. My hypothesis did not influence my study because I used systematic observation to study the two methods of participation and the students' responses to the survey were not influenced.

The data I collected from systematic observations demonstrates that a number of students do repeatedly attempt to participate by voluntarily raising their hands frequently.

Also supported by the research were these students' attempts to gain the teacher's attention through responses such as calling out, waving their arms, making noises, or demonstrating frustration in their actions such as throwing down their arms and turning away. The data did not support my hypothesis that these students are being ignored, instead showing that the majority of the time the teacher was calling on a student whose hand was raised. The data did show that individual students were not being called on as frequently as their hands were raised. Although the teacher did not use the name cards throughout an entire lesson, the times the cards were being used suggests that my prediction is correct that this method promotes whole-class participation. Over half of the students were called on to respond during the frame of time during each lesson when the cards were used to call on students. Results of the survey support my hypothesis that the students would prefer the Name Card method of participation. A majority of the class responded that they both liked this method better than the previous method being used and that they wished the teacher would use the Name Cards more.

Other studies and feedback from a teacher, who uses the Name Card method in her classroom, promote the Name Card method as a method that uses whole-class participation. These sources also suggest that this method have positive effects on the classroom's management and atmosphere. Research of a similar active student response method,

Response Cards, which allow for whole-class participation imply that this method could also improve student academics based on the idea that active students are active learners.

My own reflection of this study highlights areas in which had I more time I would have liked to explore more in depth and changes I would make. Some of these ideas are beginning the study at the start of the school year, changing the use of the WILD card, and comparing the need for discipline between the two methods. This reflection contains suggestions for continuing or extending upon the problem of student participation.

Although the research did not show that students who frequently raise their hands are being ignored, the data and sources of this study suggest the following:
the Name Card method includes all students as active participants, students prefer the Name Card method, and this method also has other positive effects on the classroom.

X. References

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XI: Appendix

Part I: Observation Transcripts… pgs.24-44

Part II: Survey questions and results…. pgs.46

Part III: Teacher interview guideline questions… pg. 47

Part I: Observation Data

T= teacher, S=Student

February 14, 2000
T: "Last week… where do we go this week?"
S: "To the cafeteria"
T: "Will we need to take our coat with us Evan?"
E: "No." (everyone responds)
- The teacher gives directions
T: "Where are we going Joshua?"
- Casey counting by ones for calendar morning activity
- Thumbs go up to challenge–2 thumbs up, calls on Josh–responds she forgot her commas
T: "What does commas means?
- Elizabeth and Lindsay raise their hands, calls on Lindsay, Elizabeth keeps her hand up, responds even though she isn't called on
T: "Megan come up and tell us about your facts family."
T: Then calls Evan to tell about the odd/even sheet–"Today is an odd day."
T: "How do you know?"
- Elizabeth, Geoffrey and Casey raise their hands, the teacher calls on Evan again,
T: "How did you know that?"
- The others put their hands down
T: "Let's help him. How does he know if it's an odd or even number?"
- Casey, Elizabeth, Josh D. Geoffrey and Jordan raise their hands, the teacher calls on Elizabeth
T: "Jordan, what does that last number tell you?"
- Geoffrey keeps his hand up while Jordan answers, he rests his hand on his head
T: "Can you come up and show me how to partner them up to show if 7 is odd or even?"
- Six hands go up, calls on Andrew
- Joshua raises his hand and the teacher calls on him
T: "O.k., calendar–Adrian."
T: "Does anyone know what our special time is?"
- Lindsay raises her hand and she is called on
T: "What time is this Andrew?" -He responds
T: "Danielle, what time is this?"
"What time is this Kirsten?"–she responds with a wrong answer, "Check again."
- Josh D. raises his hand, Kirsten responds again. Josh D. puts his hand down.
T: "Kelly, what time is that?" - Lindsay's hand is raised, but she puts it down after Kelly responds
T: "What time Geoffrey are we looking forward to?"
- There is a pause. Three hands go up (Lindsay, Evan, Kirsten). Geoffrey answers
- They continue the morning calendar activities

- Lindsay raises her hand and is called on–she asks a question
- Josh D. raises his hand and is called on to check the money
- Students move to the perimeter and the teacher joins them on the floor

T: "Ten subtract two."

- Five hands go up. She calls on Elizabeth

T: "Four subtract two."

- Eight hands up. Calls on one of the students (I can't see who answers)

T: "Nine subtract five."

- Five hands up. Calls on one of the students (I can't see who answers)

T: "Six minus three."

- Teacher points to someone, three hands go up
- Lindsay's hand up already

T: "Five minus two."

- Eight hands up, Lindsay answers

T: "Ten minus three."

- Seven hands up, calls on one student (I can't see who answers)

T: "Two take away one. Megan are you ready?"

- Some hands go up. Megan answers.

T: "Four take away one."

- Four hands go up. A person without their hand up is called on.

T: "Five take away one."

- She calls immediately on the person next to her. Their hand is not raised.
- Lindsay called on for the next question
- The teacher begins the math lesson. Candy hearts are being used. She gives the directions for the activity they will be doing
- Calls on students to answer questions of how many of each color there are–Kirsten, Becca, Josh D., Miles, Madeline
- She continues giving instructions–two students raise their hands (Andrew D. and Madeline). Andrew D. is called on and asks a question

T: "Who can help him get started?"

- Three hands go up (Geoffrey, Elizabeth and Lindsay). Calls on Geoffrey to help
- Madeline is called on (her hand is raised) and Madeline asks a question. Lindsay raises her hand to answer Madeline's question. The teacher answers it.

T: "What should I do next?"

- Geoffrey speaks out the answer without raising his hand

T: "What do you think I should do next Danielle?"

- Lindsay and Elizabeth raise their hands
- Lindsay and Elizabeth raise their hands before the next question is asked and then Jordan does too
- The teacher calls on Jordan after asking the question

T: "What else do I need?"

- Lindsay is the only person with their hand raised. The teacher calls on her.

- Geoffrey raises his hand and she calls on him. He asks a question and then answers his own question

T: "Good question. Thanks for raising that hand. What can we title our graph?"

- Six hands go up, calls on three students to give answers
- Geoffrey's hand is raised

T: "Raise your hand if you have a question on part one."

-Geoffrey keeps up his hand. The teacher calls on him.

T: "Thanks for raising your hand."

- Veronica raises her hand and the teacher calls on her.
- The teacher continue giving directions, explaining part 2

T: "Can you think of another way to sort these?"

- Elizabeth, Andrew D., Geoffrey and Veronica raise their hands. She calls on Andrew D. but he can't think of an answer. Next she calls on Geoffrey who responds "Color."
- She calls on Megan who has raised her hand. Joshua then raises his hand and she calls on him. Casey raises her hand and she is called on.
- The teacher begins to explain part 3 of the activity

T: "If I have 10 hearts, how many rows of 10 can I make?"

- Miles, Josh D. and Elizabeth raise their hands. The teacher calls on Josh D. who gives an incorrect answer. She then calls on Miles.
- Lindsay raises her hand and is called on; she asks a question
- The teacher explains part 4. She asks questions about how many are each color—Elizabeth raises her hand and is called on. The next question Elizabeth and Megan raise their hands and the teacher chooses Megan to answer. The next question Geoffrey has his hand raised, but Andrew D. is picked to answer even though his hand is not raised
- The teacher describes the challenge
- Students are sent to their desk to begin the activity

February 16, 2000

- The class begins with the morning activity board

T: "What character are we forgetting when we forget to do our morning jobs?"

- Three hands are raised. She calls on Lindsay who answers Responsibility
- Adrian comes up to explain her job
- Lindsay raises her hand and keeps it up while Adrian is explaining

T: "Elizabeth please check the North, South, East, West job."

- Lindsay still has her hand raised

T: "Did anyone lose a tooth?"

- Lindsay's hand is still up. The teacher calls on her. She asks a question

T: "If you know who these people are then raise your hand without saying anything."

- Lots of hands go up
T: "O.k. Now put them down. We'll talk about these people later."
- One of the students has their hand raised and the teacher calls on them
T: "Any other questions?"
- Lindsay has her hand up. The teacher keeps talking. She calls on Lindsay who reminds her that one of the jobs was forgotten
- The students move to the perimeter of the carpet
T: "Raise your hand if you are hungry."
- All the students raise their hands
T: "Today you are going to eat fractions. This is one whole apple. This is one whole candy bar. How many whole apples do I have on this table?"
- Eight hands go up
- Calls on Jordan to take the blue pen and write the fraction on the board.
T: "Raise your hand if you want to help her. She'll start and if she needs help she'll turn to you and ask."
- Four hands are raised, but Jordan does this by herself. The hands go down when she finishes
- Seyoun has his hand raised. He calls out twice "I have a question?"
T: "Thank you for raising your hand quietly."
- She calls on Seyoun
T: "I need someone to write whole. It's one of your spelling words this week."
- A majority of hands are raised. She calls on Becca
- Four hands go up to challenge Becca's answer and she corrects her mistake. The hands go down
T: "If I spelled it hole, what kind of hole would that be Kirsten?"
- Kirsten gives an answer
- As the teacher explains, Seyoun's hand is raised
- The teacher begins cutting the apple.
T: "What did I do? One whole becomes what—Miles?"
- About 8 students raise their hands
- Seyoun's hand is raised and as the teacher writes the fraction he keeps it up. She continues the lesson by asking a question and calls on Miles to answer—Seyoun's hand is still raised. She cuts the apple again and asks a question to Andrew S. Four hands are raised. Joshua is in front waving his hand. Seyoun's hand is still raised. The teacher calls on Josh D. to go to the board and write the fraction. Seyoun and Joshua put their hands down.
T: "If I take _ and _ and put it together what will I have?"
- Seven hands go up and Elizabeth is called on
T: "If I have _ and _ how many fourths do I have?"
- Six hands go up and she calls on Adrian
- Seyoun's and Joshua have their hands up. Seyoun tries talking out.
T: "Thanks for raising a quiet hand."

- She calls on Joshua. Seyoun and Albert have their hands raised

T: "Let's go on."

- All hands go down

T: "Now we're going to cut this into eighths."

- The teacher tells a story about a way they split apples at her house when growing up

T: "So what do you think that taught us to do?"

- Four hands go up and she calls on Lindsay

T: "Do you know how to write the fraction _?"

- Seyoun says out, "I know how to write it." Four other hands are raised. The teacher calls on Seyoun to write the number sentence
- As he does this the teacher continues to discuss fractions
- Next with another apple cuts into thirds. The teacher asks Casey a question about fractions

T: "Who can write that number sentence on the board?"

- Seven hands go up. The teacher calls on Andrew S.
- I have noticed that Albert's hand has been up a number of times and he hasn't been called on. The same with Madeline. I am noting this because it's hard to name all the hands raised each time when there are a large amount of hands raised)
- The teacher begins to read a book. Albert's hand is raised and he is waving it. The teacher calls on Albert.
- She begins reading the book and calls on students while reading the story to answer questions—Andrew S., Lindsay (she pauses and others raise their hands. The teacher helps her. Seyoun says "I was going to say that!" He throws his hands down, turns and moves away
- Seyoun returns to the group
- The teacher continues calling on students about the book—Adrian, Megan, Joshua, Geoffrey, Evan, Jordan, Veronica, Andrew D., Casey (majority of hands raised when she asks each question)
- Albert is waving his hand in the air and she calls on him to answer a question
- She reads the next page and continues calling on students to answer questions—Kelly, Becca (Seyoun puts up thumb to challenge and the teacher calls on him), Elizabeth (majority of hands are raised for each question)
- The next page of the book is read and majority of class raises their hand. She calls on Kelly to answer
- Geoffrey raises his hand and the teacher calls on him. He makes a comment
- The teacher begins to explain the activity. She stops to ask some students to pay attention

T: "One whole banana is divided into what Casey?" (Seyoun's hand is raised)

T: "Geoffrey what do they divide it into?" (referring to a pear) "What do they divide it into Seyoun?" (referring to an orange)—Lindsay, Josh D. have their hands raised to answer this question

T: "If I eat 1/3 how many are left Adrian?" " If I eat 2/3 how many sections of my banana are left Veronica?" " Miles, how many _ are in my apple?"
- The teacher gives directions for the challenge (Andrew D. has his hand raised)
- The teacher asks questions and Andrew D. puts his hand down

T: "Are there any questions?"
- Pause. Then Casey, Andrew D. and Madeline raise their hands
- The teacher begins to explain another activity

T: " How many 1/8ths are in a half Adrian?" "How many 1/3s are in a half?"
- Seyoun's hand is raised. She calls on him and he shares information he knows about fractions

T: "Tell me the things you are going to do?"
- She calls on Lindsay and Madeline

T: "How much are you going to get Kelly?"
- She send the students to their seats to start the activity

February 21, 2000
- Class begins with morning activity board
- Asks Lindsay to fix the calendar since Kelly is not there
- Asks Veronica to do the timekeeper for Miles since he left
- Adrian goes to skip counting and Josh D. and Lindsay put up challenge thumbs, both get a chance to respond
- Kirsten needs help on the computer. Elizabeth raises her hand to help and is called on to go help
- The teacher asks about the odd/even sheet. Calls on Albert to answer. She tries another number for odd/even. Lindsay and Veronica have their hands raised. Calls on Andrew S. whose hand is not raised
- Joshua raises his hand and is called on to check Josh D.'s work

T: "Who lost a tooth?"–Kirsten says she did

T: "Raise your hand and tell how many tally marks we have."
- Three hands are raised and she calls on Andrew D.
- The students go to their spots on the carpet

T: "O.k. Fractions. Friday night I had a pizza. My pizza had 8 slices, so what is my numerator going to be? What is my denominator going to be?"
- Elizabeth, Lindsay, Miles and Joshua raise their hands. Miles is called on

T: "We have a family of four. My son ate 2/8th s of the pizza. Josh D. take away how much Maury ate, 2/8ths of the pizza."

T: "How much of the pizza is missing?"
- Albert, Elizabeth, Lindsay, Miles, and Evan raise their hands. Elizabeth is called on to answer

T: "Two-eighths is the same as something else."
- Albert, Miles, and Lindsay raise their hands and Albert is called on.

T: "Try something else."
- Miles is waving his arm in front of the teacher and yells out the answer. She asks him to sit, then calls on him to answer
T: "Now, Healy only had 1/8th of the pizza. Veronica, can you please takeout how much Healy ate." (no hands were raised)
T: "My husband ate 4/8ths of the pizza. Adrian, take away 4/8ths." (no hands were raised)
T: Now, four-eighths is the same as…. How much pizza did he eat?"
- Miles, Joshua, Josh D., Lindsay and Elizabeth raise their hands. The teacher calls on Andrew D. whose hand is not raised. He hesitates and she asks the question again and lots of hands go up.
T: "Now, if Healy had 1/8th and Maury had 2/8ths or 1/4th and Mr. Baker had 4/8ths or _, how many slices of pizza did I have Elizabeth?" (no hands raised)
- They all count together and add it all up.
- The teacher begins to explain the activity.
T: "Looking right now, which do you think is the biggest piece?"
- Miles, Andrew D., Seyoun, and Lindsay raise their hands. The teacher calls on Becca whose hand is not raised
T: "What is the smallest piece?"
- Miles, Evan and Lindsay raise their hands. The teacher keeps reading questions on the sheet without calling on anyone
- She finishes reading the first sheet and begins to explain part 2 of the activity. Seyoun's hand is raised.
T: "If it says 3/6ths how many do you shade Danielle?"
- Three hands go up—one of them is Seyoun's
T: "If it says 2/4ths, Seyoun how many do you shade? If it says _ Megan how many do you shade?" "I need one person to come up and write the fraction for the shaded area."
- Lindsay, Seyoun, Josh D., Miles, Andrew D. and Jordan raise their hands.
- Seyoun calls out, "I have a question."
T: "What's your question Seyoun?"
- After Seyoun's question she calls on Jordan to write the shaded fraction
T: "What part is not shaded?"
- Lindsay, Seyoun, and Josh D. raise their hands. The teacher chooses Seyoun to answer
T: "What do you notice about their answers?"
- No hands are raised. She calls on Andrew D.
- She asks about the shaded and not shaded part for the rectangle. Miles, Joshua, Josh D., Lindsay, Seyoun, and Kirsten all raise their hands. The teacher calls on Kelly to answer, whose hand is not raised
- Albert and Josh D. raise their hands to challenge
T: "Josh D., you had your hand up first."
- The teacher reviews what the students will do when they return to their desks. Andrew D. has his hand raised and

then puts it down. Andrew D. raises his hand again. The teacher calls on him and he asks a question
- Students return to their seats to start their work.

February 23, 2000

T: "How many months have 28 days?"
- Albert, Elizabeth, Lindsay, Joshua, and Evan have their hands raised. The teacher calls on Albert. She then calls on another student whose hand is not raised to answer also (I can't see who this student is)
- Joshua raises his hand. The teacher calls on Joshua.

T: "Let's figure out how many leap years. Kelly, what's 2 +4? And 9 +0 Andrew D.? And 1 +0 Casey?" (No hands are raised during this questioning)

T: "Another form of measurement…"
- Some students are talking

T: "I like quiet hands."
- Josh D. and Miles have their hands raised and she calls on Josh D.

My battery on my video camera went dead. The following information is data that I observed:

-Questions asked to student doing morning activities—other students raised their hands but aren't called on
-Geoffrey raises his hand lots and isn't called on. He yells out answers.
-Joshua has his hand raised and is making sounds, "Oh, Oh."
-Geoffrey has his hand raised, he is waving his hand to get attention
-Seyoun and Geoffrey have their hands raised. Geoffrey puts his hand down.
-When the teacher asks for a volunteer to stand on the scale all hands go up. The teacher chooses one person. When the teacher says the students need to return to their seats some say, "I want to weigh."
-When she calls on Madeline to answer a question, Madeline wants to make a comment that she had wanted to say earlier instead of answering the question

February 28, 2000

T: "What is 5 +5+5-5? Can we somehow group these together? What's 5+5?"
- A student yells out. Elizabeth has her hand raised and the teacher calls on Elizabeth, saying "Thanks for that quiet hand."

T: "Kelly, what's 5+5?" (her hand is the only one raised)

T: "So 10+0 is 10."
- Andrew D. raises his hand and the teacher calls on him. He says he can explain how she did the problem.

T: "I want to compliment some people who did the challenge last week–Megan, Andrew S., Andrew D., Josh D., Seyoun, and Elizabeth. You have to figure out who they are when I read it. My birthday is May 1. My half-birthday is…" The teacher models how to figure it out.
- She reads one of the student challenges. Evan raises his hand and she calls on him. He has an incorrect answer so she calls on Becca who has her hand raised (Geoffrey also has his hand raised). Next she calls on Joshua whose hand is raised and he gives the correct answer.

T: "Whose half-birthday is Christmas Day? December 25th?"
- Lindsay and Evan have their hands raised. She calls on Lindsay but she doesn't give an answer so the teacher calls on Evan.

T: "Josh D. is going to tell you his birthday. Raise your hand when you figure it out."
- Josh D. tells his birthday date and Joshua, Madeline, Evan, Becca, Lindsay, Geoffrey, Kasey and Veronica raise their hands. Josh D. gets to choose who answers and he calls on Evan and then Geoffrey.
- Next the class begins their morning activity board. Kristen leads the calendar and calls on students to explain their jobs.
- During the description of skip counting, Madeline, Andrew S., and Becca all raise their thumbs to challenge. They all get a chance to speak.

T: "Raise your hand if we skipped your job."
- Andrew D. calls on him and he explains his job

T: " If you will stand up… Using your feet only you will be solving some addition problems. This week we are going to be working on strategies for facts to 18."
- She gives an example

T: "Ready with your right foot stomp 5, with your left foot stomp 5 while counting in your head."
- Everyone stomps

T: "O.k. If I change this to 5 + 6, what did I do to that bottom number?"
- Six hands go up (Elizabeth, Miles, Geoffrey, Becca and Andrew D.) and she calls on Andrew D.

T: "Now 6 +6. Stomp it out. What did you get?"
- Everyone responds 12

T: "What is 6 +7?"… "Twelve + 1 is 13."

T: "Now have a seat. This is doubles… 5 + 5, 6 + 6, 7+7 Becca (no hand up), 8+8 Andrew S. (4 hands are up, his is not), Danielle 9 + 9 (5 hands up, but she calls on Danielle before giving the problem)

T: "You have to know doubles within 4 seconds."
- She goes over the doubles again

T: "Now, you have to know how to add 1."
- She goes over these. The students respond chorally.
- The teacher calls up six students–Kristen, Adrian, Megan, Casey, Miles, and Joshua

T: "How many children do you see Andrew D.?"… " Now I am going to show you two more–Elizabeth and Geoffrey."

T: "Six and two equals what Becca?" "How many students do we have up there now Casey?" "Josh, let's make it 8 and 2 more. Pick two friends."
- He picks Andrew D. and Andrew S.
T: "Eight and 2 more equals what Danielle?" (The teacher counts aloud to help her) "Let's try two more. Madeline and Jordan join." Now 10 and 2 more makes what Kelly?" "Let's try 12 plus 2 more–Kelly and Becca join us." "Everyone standing what do you get?" "Josh and Lindsay join them." "We're at 16 plus 2." (4 hands are up) "What do you have Elizabeth?" "Now Elizabeth, if we're at 18 and Seyoun and Albert come back, Veronica, what do we have?" "Then Evan and Ms. Baker join you so you have 20 plus 2 more, Joshua, what do you have?"
- The teacher has the students sit back down on the carpet and compliments Elizabeth, Miles, and Casey for being ready
- The teacher begins to explain the activity. As she is modeling the thinking process students are raising their hands. She lays out the cards 5+5+3.
T: "Danielle can you do that for me?" (Danielle is playing with her dress, others have their hands raised)
- Geoffrey talks out giving an idea after Ms. Baker continues
T: "Try one more time." "Casey, here is your problem, 4+4+2."
- The teacher reviews what the students will do at their desks.
T: "Raise your hand if you can tell me the first thing you're going to do."
- Six hands go up, the teacher calls on Andrew D.
T: "Then after I turn it in Lindsay what do I do?"
- Casey has her hand raised and the teacher calls on her
- The students return to their desks to work

March 1, 2000
- The class begins with students raising hands to answer computer graph question
- The teacher calls on Joshua to go help with the computer graph
- The students begin the morning calendar board
- Josh D. raises his thumb to challenge Madeline's answer. The teacher calls on him.
- Seyoun challenges Joshua on his odd/even job. The teacher calls on him
T: "Joshua, would 108 be odd or even?"
T: "What number is the last number you are looking at? 1, 0, or 8?
- Josh answers
- There are 4 thumbs up to challenge Evan's attendance graph (Geoffrey, Miles, Joshua, and Andrew D.). Someone yells out, "I have a challenge… He put them on the wrong side."
T: "Very good observation."

T: "One person came in late, let's see where we can change this."
- Lindsay raises her hand, but the teacher continues talking out the answer with the class
T: "Miles will you check Geoffrey's work?" "Jordan will you check Veronica's money?"
- The teacher asks everyone to stand up
T: "If you are the age of 9 minus 2, please have a seat. Andrew, how old are you?" "If you are 7 or 9-2 then you should be seated." "If you are the age of 3+4+3 more please turn around."
- No one turns around
T: "Albert, why didn't you turn around?" "How did you know that was ten?" "If you are the age of 10-2+2-2 sit down."
T: "Josh D., how come you said everyone who is standing up sit down."
- While Josh responds Miles has his hand raised. When Josh finishes his answer, Miles puts his hand down
- The teacher asks the students to move to their places on the carpet
- She introduces the name cards
T: "We are helping out our friend here and she has some cards. These cards have your names on them. As you know, she's been taping our lessons on Mondays and Wednesdays for the past few weekends and will be here a few more weeks because she's observing something and at the very end I'll tell you what she's been watching. But, to help her out, on the cards are your names and for me to call on you today I have to draw your name. Even if you have your hand raised. In here are some wild cards. That means I can call on anyone I want….right?
Me: "That means the last person you called on gets to pick the next person."
T: "Alright. Yesterday in math we started working on our strategies for adding numbers to eighteen using an 8 or 1 as one of your numbers. Who can tell me what's the strategy when we're adding with 8?"
- Elizabeth, Albert, Seyoun, Geoffrey and Linda raise their hands
T: "Oh." (she draws a card) "Geoffrey."
T: "What did we make the eight?"
- Madeline and Andrew D. raise their hands
T: "So now think 10 + 2 is what Geoffrey
T: "Let's try the next one. Who can come up for me and write our next problem here?"
- Four hands go up. The teacher draws Miles' card. Andrew D. raises his hand
- The teacher tells about Shel Silverstein's homework machine and shows a picture of it. She reads a poem about the homework machine
- Josh D. raises his hand and the teacher calls on him
T: (draws a card) "Andrew D., give me a problem using the 8)."
T: (card) Elizabeth, what's 8 + 6

- The class reads the poem together with the problem 8 + 6 and the answer 14. Someone yells out, "What is that one?"

T: "You need to raise your hands."

- Miles, Geoffrey, and Seyoun raise their hands. The teacher calls on Seyoun
- Lindsay raises her hand and is called on. She reminds the teacher, "You forgot to pick a card."

T: "I sure did. Thanks for reminding me." "What I covered up we're going to talk about now. The problem Shel Silverstein actually wrote was 9 +4. I need your help thinking of a strategy to solve 9 + 4/

- Miles, Seyoun, Geoffrey, Lindsay, Elizabeth, Albert, and Becca raise their hands. A handful of students speak out reminding the teacher to use the cards. The teacher uses a card to call on Jordan.

T: "When adding with 9 it's called make 10, subtract 1."

- The teacher has the students move to the perimeter of the carpet and hands out workmats. She calls Albert, Elizabeth, Madeline and Seyoun to work at the table so there is more room. She hands out unifix cubes.

T: "You're going to solve 9 +5."

T: "Now Veronica. Ooops. (She forgot to pick a card) Veronica, I'm calling on you anyway. What do I need to think here?"

- Elizabeth has her hand raised as the teacher questions Veronica
- The students work the problem out on their workmats after Veronica answers

T: "What's the answer then?" (The teacher adds a pause before picking a card) "Joshua H."

- The teacher has the students clear their boards to do another problem, 9 + 7
- Elizabeth raises her hand

T: "Raise your hand when you have an answer."

- Students raise their hands to answer.

T: "What is your answer Evan?" (no card used)

T: "O.k. 9 +3." (hands begin to raise as the students solve) "Becca, what's your new problem?"

- The teacher shows the final covered part of the poem and the class reads it chorally again

T: "Raise your hand when you discover something."

T: "Madeline, what did you notice?" (no card) "What is it Adrian?" (no card)

T: "Is 9+4 three? Is this a perfect homework machine?"

- The class responds no

T: "Danielle, what do you think is here?" (no card)

-The class reads the poem a final time and then the teacher gives directions on solving 9's problems. The students return to their seats.

March 6, 2000

- The teacher helps students find their spots on the rug, she reminds them where each sits
- Elizabeth leads the morning activity board and calls on students to explain their jobs
- The teacher helps to correct Andrew D.'s fraction chart

T: "Who ate most of the pie?" "Andrew D. call on someone."

- Majority of hands go up and Andrew D. calls on Geoffrey

T: "Why?"

- Geoffrey again answers since this question is directed towards him

T: "O.k. Elizabeth."

- Elizabeth continues calling on students to do their jobs
- Thumbs go up to challenge Becca's skip counting–Lindsay, Geoffrey, and Miles. Lindsay is chosen to respond

T: "Raise your hand if we skipped a job."

- Miles and Lindsay raise their hands

T: "What did we miss?"

- Someone responds money

T: "Seyoun can you walk over and see who the money person is?"

T: "Now, we're going to work with the money over here so if you'll turn to face Danielle, I'm going to share some things with money."

- The teacher explains, the first person she calls on will tell the name of the coin, the second person will give the coin's value. She uses the name cards to call on the following students: Lindsay, Kelly, Megan, Jordan, Casey, Wild (all hands go up, Casey chooses someone to answer), Becca, Veronica, Miles, and Andrew D.

T: "Thomas Jefferson's home Monticello is located where?"

- The teacher calls on Jordan without using a card to choose
- Seyoun speaks out, "Rotunda means circle."
- The teacher uses the cards again to call on students to respond about the coins and their value again. She calls on Elizabeth and there is a long pause.

T: "I'm going to let (draws a card) Adrian help you."

- Next she chooses Joshua's card. There is a long pause.

T: "Joshua, I'm going to let you turn around and pick someone."

- Joshua calls on Josh D.(whose hand is raised), who then calls on Albert for help (his hand is raised). Albert also does not know the answer. Other students have their hands raised

T: "Where could we look? What resource could we use?"

- Geoffrey speaks out. Miles has his hand raised and the teacher calls on Miles (no card used)
- Geoffrey gets up and is walking around trying to find the book he had yelled out to show to teacher.
- The teacher finds the President's picture she is looking for and asks the class if the picture is the same as the picture on the coin. The whole class responds yes.
- The teacher begins to tell about the Chinese New Year envelope. The teacher asks Albert if he knows about the

Chinese New Year envelope. The teacher then explains what it is and why the envelopes are red.
- The teacher introduces a book and explains the activity that will follow reading the book. Andrew D., Joshua, and Seyoun all have their hands raised. The teacher calls on Joshua and then on Andrew D. As Andrew D. talks, Joshua raises his hand and Seyoun's hand is still raised. The teacher calls on Andrew D. again and then calls on Seyoun.
- The teacher hands out extra copies of the book so that people in the back can see and follow along. She begins reading the book
- The teacher reads a Chinese word and asks Albert if she is pronouncing the word correctly
- Using the card to choose a name the teacher asks Lindsay a question about the story
- Seyoun raises his hand and the teacher calls on him
- The teacher continues asking questions throughout the book and uses the cards to call on students to respond. She calls on the following students: Madeline, Seyoun, Josh D.(Josh D. pauses and seven hands go up, one student says "I know."), and Andrew S.
- Albert raises his hand and the teacher calls on him
- The teacher continues reading and calls on Danielle using a card to answer a question
- Seyoun has his hand raised and speaks out
- The teacher continues reading
- Evan is called on to answer a question, the teacher uses a card to choose his name. Called on next using cards are Albert, Kristen, and Geoffrey. Geoffrey doesn't know. The teacher draws a card for another student to respond to the same question. It's a WILD card and Geoffrey gets to choose a person. He calls on Andrew D.

T: "What do you think Miles?" (no card used and Miles hand is not raised)

T: "Why is he the lucky one Jordan?" (no card)
- Linda, Becca, and Kelly have their hands up. No card is used and the teacher calls on Kelly
- The teacher explains the activity directions. She asks a question and Albert, Andrew D., and Elizabeth raise their hands. The teacher calls on Elizabeth
- The teacher continues the directions
- Kelly and Josh D. have their hands raised, Madeline raises her hand. They keep their hands raised and the teacher continues giving the directions. Madeline and Josh D. put their hands down, Kelly keeps hers up.
- When the teacher is finished talking she calls on Kelly whose hand is still raised to respond to a question
- Madeline and Josh D. raise their hands again. The teacher calls on them both

T: "Raise your hand and tell me why we're making these."
- Miles, Seyoun, and Elizabeth raise their hands. The teacher calls on Elizabeth (no card).
- As Elizabeth explains, Miles, Geoffrey, Joshua and Becca raise their hands. The teacher calls on Becca

T: "Any questions?"
- Geoffrey and Joshua have their hands raised and both get called on.
T: "Casey, when you go to your desk what is the first thing you need to do?" (no card used) "What color should your decorations be Kirsten?" (no cards used, a few hands are raised)
- Lindsay has her hand up and the teacher calls on her
T: "O.k. if your table can tell me what coin this is and its value then you can get started."
- Majority of hands go up
T: "Let me find my cards."
- The teacher uses the cards to call on students–Geoffrey, Kirsten (she is Geoffrey's table and gets to pick someone else to respond, she chooses Lindsay), Madeline (she is at Kirsten's table and chooses someone else to respond, she chooses Kelly), Joshua.
- The teacher realizes there is another table left and calls on someone from that table to answer a question (no card used)

March 8, 2000
- The class begins with the teacher asking time questions. A majority of the class is raising their hands. The teacher is calling on students without the name cards. She walks over and gets them before calendar.
- Albert leads the morning calendar activities and calls on students to do their jobs
- Six thumbs go up to challenge while reading the skip counting job
T: "Albert, you're the teacher, call on someone to challenge."
- Albert calls on someone to correct the error
- During Casey's math facts Josh D. calls out "Challenge."
T: "What is your challenge?"
- Albert calls on Geoffrey to check the directions job
T: "Miles, will you go check the money?"
- The students turn to face the blue chair
Using the cards:
T: "Kirsten, 5 +5 is…." "What strategy did she use Geoffrey?" "Six + seven is, the first person will tell me the answer, then the next person will give me the strategy."
-The teacher continues using the cards, calling on Josh D., Lindsay, Kelly, Megan, Jordan, Casey, Wild (Hands go up, Casey picks Lindsay)
-Geoffrey's waving his hand wildly and the teacher whispers to him, "Excuse me, you're distracting me."
- The teacher continues and uses the cards to call on Becca and Veronica
T: "We're going to work on some Chinese math today…"

- The teacher reads a description of a puzzle to see if the students can guess the name of the puzzle

T: "Does anyone want to guess what kind of puzzle this is?"

- Geoffrey raises his hand and the teacher calls on him

T: "Raise your hand if you've ever heard of a tangram."

- Five hands go up
- The teacher explains what a tangram is

T: "You can put your hands down now."

- The teacher explains the activity and the book for the day

T: "Let's review. What is a tangram? Raise your hand fi you can tell me how many pieces a tangram has."

- About 9 hands are raised. The teacher picks a card to choose Madeline.
- The teacher tells about the shapes in a tangram. She walks the students through the instructions.
- Kelly raises her hand and the teacher calls on her. Then the teacher continues the directions. Veronica raises her hand and the teacher calls on her. Andrew D. has his hand up and he is called on next.
- Final instructions are given.
- (No cards are used) The teacher calls on Adrian to hand out bags. Calls Elizabeth and Joshua to hand out the puzzles.

T: (no card) "What's the first thing I do when I go to my desk Evan?"

- Lindsay and Miles have their hands up. The teacher calls on Lindsay to answer a question.
- Students are sent back to their seats. The teacher gives them time to cut out puzzle pieces. Then she assigns them a character and reads the story having the students create the tangrams in the story.

March 20, 2000

v These notes were taken during class. A video camera was not available to record the data for future viewing.

- Reads the note from the substitute

T: "What did she say about the shamrock?"

- (no name cards used) Seven students raise their hands, the teacher calls on four students to answer
- The teacher tells a story about her Irish grandmother
- Calendar person begins the morning job activities. This person calls on people to tell about their jobs
- Joshua challenges Miles counting by 3's

T: "Megan, if it's the 125th day of school, how do you know it's odd?"

T: "Do we have perfect attendance?"

- Someone yells out "Yes."

T: "Raise your hand please."

- Two hands go up. Joshua, doing the job, is the person who responds to her question

- Lots of people are off-task—looking around, fidgeting, talking
- The teacher stops and asks everyone to pay attention
- Four challenges to Madeline's job. Four hands go up. The teacher calls on Joshua, but he doesn't want to answer (even though his hand is up). She also gives the other 3 students a chance to respond
- The teacher tells about going to a conference on Friday and bragging about the morning calendar activities, but is now embarrassed because lots of jobs were not done this morning. She talks about responsibility.
- Andrew D. begins talking while his hand goes up. The teacher asks him not to interrupt. She finishes speaking then calls on him (his hand is raised still).
- The teacher has everyone stand up. Asks Miles, standing near her, to help hold up the chart.
- The class reads a poem

T: "I would like 4 friends (uses the cards to choose) to go to the board and read the money song. Evan, Kristen, Andrew S. and Kelly."

- The teacher calls another group to read (uses cards to choose)—Danielle, Josh D., Megan, and Joshua

T: (uses cards) "Geoffrey, how many pennies are in a nickel?"

- She then calls Madeline, Lindsay, Miles and Adrian to go read the poem (uses the cards to choose)

T: (uses cards) Elizabeth, how many nickels are in a quarter?"

- She then calls Elizabeth, Veronica, Casey, Andrew D., Becca, and Jordan to go to the board and read the song (uses cards)

T: (no card used) Becca, can you please re-read for me the 3rd verse?"

- The teacher asks what is the rhyme scheme? She reminds students to raise their hands. Eight hands go up and she uses the cards to call on students to respond—Andrew D., Josh D., and Evan
- The teacher has to ask Joshua to turn around (she stops next to him and whispers to him)
- The teacher talks about how people are not paying attention to their character counts
- Geoffrey raises his hand and the teacher calls on him
- The teacher mentions possibly needing to have class meetings to discuss the problem
- She continues math with a discussion about money

T: "How much is a half-dollar worth?"

- Andrew D. is chosen using a card to respond

T: "Can anyone tell me how many quarters are in a half-dollar?"

- She calls on Josh D. but doesn't use a card to choose him (no hand raised)

T: "Can anyone tell me how many dimes are in a half-dollar?"

- Casey is called on to respond without choosing her name card (no hand raised)

T: "Can anyone tell me how many pennies are in a half-dollar?" " I am only going to call on quiet hands." (Several students are answering aloud)
- The teacher calls on Kelly who has her hand raised (others have their hands up too)
- Lindsay raises her hand

T: "Is there another way to make 50 cents?"
- She calls on Lindsay to respond (no card used). Joshua, Elizabeth, and Jordan have their hands raised

T: "How many more pennies do I need–Adrian?" (Adrian's hand was raised, no card used)
- The teacher calls on Elizabeth to offer a way to make 50 cents. Next she calls on Danielle whose hand is not raised to answer a question. Megan is the next to be asked a question.
- Miles has his hand raised and the teacher calls on Miles
- The teacher asks Josh D. to hand out papers (no card used to choose him)
- The teacher asks if there are any questions. Joshua raises his hand and the teacher calls on him
- The teacher describes the second activity
- Lindsay raises her hand and the teacher calls on her
- The teacher uses cards to pick people to respond to a question. When the person answers their table may return to their seats. She draws the following name cards: Geoffrey, Elizabeth, Andrew S., Adrian, (for the last two names she draws until a name appears that hasn't returned to their seat), Becca, and Lindsay.

March 22, 2000

T: "Would you please start the $ song? Who wants to start?" Evan and Adrian first hands up–as calls on them 3 other hands go up

T: "Adrian, pick someone to tell you how many nickels in quart?"
- Seven hands go up, the teacher calls on Geoffrey

T: "Evan, is that right? What do you think?"

T: "Evan, pick someone to tell us how many dimes are in a dollar?"
- Eight hands go up and Evan calls Andrew S.
- The teacher explains what the class will be doing with another teacher and explains a riddle writing activity
- Josh D. and Joshua have their hands up–the teacher continues giving directions

T: "Josh, what do you think we are going to do? And whose name do you think we are going to write?
- Miles and Evan raise their hands. The teacher calls on Miles, then Evan
- The teacher shares with the students about the assembly they are having today–the students respond with a chatter

of excitement. Seyoun raises his hand and yells, "I know what it is."
T: "I really like when you raise your hand if you want to share something."
- Seyoun keeps his hand up. The teacher shows the newspaper that publicizes the event and tells the time of the assembly. Miles yells out, "That's our gym time."
T: "What does that information tell us about our program?"
- Seyoun's hand is still raised and he tries to extend it even more, Madeline and Miles raise their hands. The teacher calls on Madeline and Seyoun puts down his hand and looks away
T: Does anyone know what Cherokee means?
- Geoffrey begins to answer. The teacher stops him by saying, "Thanks for raising your hand." Geoffrey stops, raises his hand and the teacher calls on him
T: "Do you know what Native Americans are?
- Four hands go up and the teacher calls on Joshua
- Seyoun raises his hand, "Oh, I know what it is." The teacher stops him with her hand, finishes speaking, and then calls on him
- Geoffrey has his hand raised and the teacher calls on him
- Elizabeth raises her hand and then puts it down
T: "Danielle, could you take this to Mr. B to share with his class?"
- Seyoun raises his hand and then puts it down when the teacher begins talking
- The teacher goes over the day's schedule
T: "Any questions?"
- Josh D., Seyoun, and Madeline raise their hands
- The teacher calls on Seyoun, then Madeline, then Josh D.
T: "Any other questions?"
- Josh D. raises his hand again and the teacher calls on him
T: "Let's move along."
- The calendar person comes up to lead the morning calendar activities
- Three hands go up to challenge skip counting—Josh D., Miles, and Joshua. Joshua yells, "I have a challenge." The teacher calls on Andrew S., then Miles. Joshua puts his hand down
- The first group that was working with the other teacher returns. Six students raise their hands to be called next. The teacher chooses people who sit at a certain table to go.
T: "Albert, call on someone to check it."
- Geoffrey, Andrew D., Veronica, Josh D., Kirsten, and Lindsay raise their hands. Albert chooses Geoffrey
- Andrew D. keeps his thumb up to challenge and keeps it up as the teacher continues with the activities, after a little while of the teacher talking he puts his hand down
- Evan puts up his thumb to challenge the fact family and is called on

- The students move to the perimeter of the carpet. The teacher goes to get a book to read and a number of students are talking–"I have that book" or "I read that book."
- The teacher says she is going to test students before starting the book. She uses the cards to call on students and give them money questions–Albert, Evan, Danielle, Jordan, Becca. Next she calls on Kelly (Kelly is having trouble so Andrew D. is sent to get the money for her to use–the teacher says they'll come back to her after she works it out), Casey (also needs to use the money and they will return to her). While Casey is working they go back to Kelly for an answer, then return again to Casey. The teacher continues calling on students using the cards–Josh D., Andrew D., Geoffrey, Lindsay (T: "We'll come back to you"–she is having trouble). Next Megan is called on and Andrew D. softly whispers her answer while she is thinking. They return to Lindsay. Next there is a WILD card; Josh D., Evan, Kelly, Andrew D., Geoffrey and Elizabeth raise their hands. Kirsten is called next–others are yelling out the answer as the teacher pauses to draw this card. Next Andrew D. is called and then Joshua.
- The teacher begins the book. She gives instructions to the students to listen first then the second time they read it they will do some work.
- She uses the name cards to ask questions during the reading of the book–Veronica, Josh D., Becca (Geoffrey is talking out), and Elizabeth.
- After looking at the cards to see who has not been called and realizing they are all out of the room, the teacher calls on Lindsay to pick two helpers to hand out math journals
- The teacher gives the students instructions on what to do this time when she reads the book
- Veronica raises her hand and is called on. Joshua raises his hand and is called on; Lindsay raises her hand and is called on. Evan raises his hand and is called on
- The teacher models for the students how to title their math journal page
- She re-reads the book having the students figure out how much money was found. Madeline talks out, "I already know how much money."

T: "Joshua, how much money do they have?"

- The students finish math for the day

Part II: Survey Questions and Results

Survey
(Circle one answer for each question)

1. I like when the teacher calls on me.
   YES NO

2. I feel happy when the teacher calls on me.
   YES NO

3. I feel sad when the teacher does not call on me.
   YES NO

4. I wish the teacher called on me more.
   YES NO

5. I like it the best when the teacher uses the name cards to call on me.
   YES NO

6. I wish the teacher used the name cards more.
   YES NO

Survey Results:

Question Number	III. YES	IV. NO
1	21	0
2	21	0
3	9	12
4	15	6
5	18	3
6	17	4

Part III: Teacher Interviews

1. How do you use the name card method?
2. What do you call this method?
3. What method did you use before this method?
4. Why did you choose to implement this method?
5. Where did you learn about this method?
6. What changes have you observed since beginning this method?
7. What are the benefits of this method? The disadvantages?
8. What are the students' reactions to this method?
9. What other comments would you like to add about this method?